United States Department of Agriculture | Forest Service | Arizona Zone Entomology and Pathology | 2500 S. Pine Knoll Dr. Flagstaff, AZ 86001 FAX: (520) 556-2130 Voice: (520) 556-2073

File Code: 3410 **Date:** November 8, 1999
Route To:
Subject: 1999 Insect and Disease Aerial Detection Survey of the Apache-Sitgreaves National Forests
To: Forest Supervisor Apache-Sitgreaves National Forests

The annual insect and disease aerial detection survey was conducted over the Apache-Sitgreaves National Forests July 26, 27, and August 4, 18, 19 and 20 1999. This letter provides a summary of the conditions observed during those flights.

Ponderosa pine mortality associated with western pine beetle increased slightly from 94 acres in 1998 to 165 acres in 1999. The mortality was only seen in small pockets of 1 to 10 trees. Mortality due to *Ips* spp. decreased from 155 acres in 1998 to 95 acres in 1999. *Ips* killed trees were also found in small pockets of 1 to 10 trees. In 1999, mortality due to roundheaded pine beetle was recorded on 278 acres.

Douglas-fir mortality decreased from 420 acres in 1998 to 358 acres in 1999. The damage was most extensive in two areas, near Alpine on the Apache portion and near Bear Canyon Lake on the Sitgreaves portion of the forests. Pockets of mortality ranged in size from small infestations 1 to 10 trees up to a large polygon of 100 trees. Most of the douglas-fir mortality was scattered throught the area surrounding Hannegan Meadows. True fir mortality due to a complex of insects and pathogens occurred on 836 acres in 1999 up from 492 acres in 1998. Most of the mortality was concentrated near Sprucedale on the Apache portion of the forest and in the area around Bear Canyon and Bear Canyon Lake on the Sitgreaves portion. Spruce beetle mortality was recorded on 37 acres in 1999.

Aspen defoliation decreased in 1999. Defoliation ranged from light to heavy and was detected on a total of 3,284 acres (1,653 acres of light defoliation and 1,631 of heavy). There were 5,224 acres of defoliation recorded in 1998. Pockets of defoliation were seen throughout the forest where there was host type. The large aspen tortrix was active on the leaves early in the season, however, the majority of the damage was due to a late season frost when the leaves were still tender.

Only light western spruce budworm defoliation was noted in 1999 on 247 acres a decrease from 488 acres in 1998. The defoliation was confined to the Apache side of the forest and was mainly observed in the Escudilla Wilderness and near Noble Mountain. A small area (26 acres) of Prescott scale was recorded. Extensive defoliation was seen on the Apache side of the forest due to two different insects. A looper, *Nepytia janetae,* with no common name expanded from polygons noted on Mt. Baldy in 1998 (initially thought to be spruce aphid) to an almost 10,000 acre ring around the mountain. Only 988 acres of this (132 acres of light defoliation and 856 acres of heavy defoliation) is located on the Apache Sitgreaves National Forest. Another defoliator whose populations were high in 1999 was ponderosa needleminer, *Coleotechnites spp.;* 9,713 acres around Nutrioso and Alpine were affected. No spruce aphid activity was noted in 1999.

There were 3,462 acres of forest impacted by fire on the Apache Sitgreaves in 1999. This figure includes both prescribed burning and wildfire.

Electronic format copies of the map files and data are available to forest and district personnel for use on any projects where this information would be of value. Please forward this letter to the appropriate personnel.

If you have any questions concerning the survey, the information included here, or map availability, please feel free to contact Bobbe Fitzgibbon (520-556-2072) or Steve Dudley (520-556-2071).

/s/ Bobbe Fitzgibbon

Bobbe Fitzgibbon

Acting Zone Leader, Arizona Zone Entomology and Pathology

cc: llucero/r3

dparker/r3

dallenreid/r3

E&P:B.Fitzgibbon:bf:11/10/99:(520)556/2072